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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,242	03/30/2004	Roger G. Sellers	CH-30684 (710240-576)	4836

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EXAMINER	
AMIRI, NAHID	
ART UNIT	PAPER NUMBER
3679	

MAIL DATE	DELIVERY MODE
04/02/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/813,242	SELLERS ET AL.	
	Examiner	Art Unit	
	NAHID AMIRI	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-8 and 10-12* is/are pending in the application.

4a) Of the above claim(s) *12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8,10 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

In view of Applicant's Amendment received 12 January 2009, amendments to the claims have been entered. Claims 2 and 9 are canceled. Claims 1, 3-8, and 10-12 are pending.

Claim 12 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 13 December 2005.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

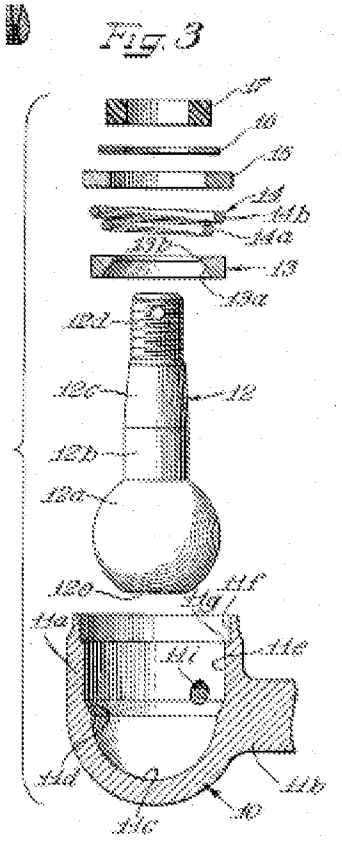
> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

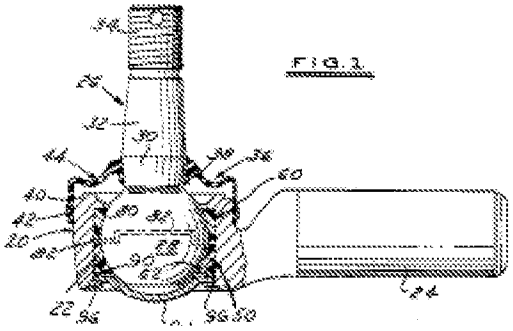
Claims 1, 3-8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 2,635,906 Graham et al., in view of US Patent No. 5,564,853 Maughan, US Patent No. 4,076,344 Gaines et al., and US Patent No. 3,128,110 Herbenar.

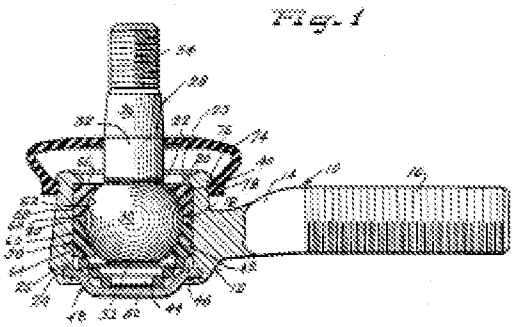
With respect to claims 1 and 4, Graham et al. disclose a joint assembly (10, Figs. 1-2) (column 2, lines 34-40) including a metal housing (11) having a side wall which defines a central bore having a closed end and an open end; a metal lower bearing being unitary with the housing (11) having a movable member (12) having a head end portion (12a) disposed in the central bore and a shank portion (12b-12d) extending from the head end portion (12a), the head end portion (12a) engaging the central bore of the metal housing (11), the shank portion (12b-12d) being at least partially disposed outside of the central bore; an annular metal upper bearing (13) disposed about the movable member (12) within the central bore, the annular metal upper bearing (13)

having an inner surface engaging the head end portion in direct metal-to-metal sliding contact (12a); an annular cover plate (15) disposed about the movable member (12) and secured within the central bore; a spring member (14) compressed between the annular cover plate (15) and an upper surface of the annular upper bearing (13); and wherein the spring member exerts an axial preload force on the annular metal upper bearing (13) toward the closed end of the central bore, and the head end portion (12a) simultaneously. Graham et al. fail to disclose that the housing having an axial lubrication port disposed in the closed end of the central bore; the metal lower bearing including a lubrication slot disposed on an inner bearing surface , the lubrication slot being generally axially aligned with the central lubrication post in the metal housing to provide a common lubrication passageway; and the outer surface of the annular metal upper bearing engages the side wall, and the upper bearing having a split segment linking the inner surface with the outer surface, the metal upper bearing having an inner surface engaging the head end portion in direct metal-to metal sliding contact, and outer surface engaging the side wall, and the split segment disrupting a full circular continuity of the annular metal upper bearing and establishing a generally C-shaped body thereof and providing circumferential flexibility in the annular metal upper bearing. Maughan teaches a joint (Fig. 2) having a housing (30) having an axial lubrication port (P) disposed in the closed end of the central bore; a lower bearing (22) including a lubrication slot (S) disposed on an inner bearing surface, the lubrication slot (S) being generally axially aligned with the central lubrication post (P) in the housing (30) to provide a common lubrication passageway. It would have also been obvious to one of ordinary skill in the art at the time of invention was made to provide the closed end of the housing of the Graham et al. with an axial lubrication port and provide a lower bearing with a lubrication slot on an inner bearing surface which the slot being axially aligned with the lubrication port as taught by Maughan in order to use to lubricate the joint. Gaines et al. teach a ball joint (Fig. 1) including housing (20) having a lower bearing (50) and an annular upper bearing (60). Further, even (Fig. 1) the lower and upper bearings made from plastic, meanwhile, Gaines et al. teach (column 3, lines 45-48) there is another metal alternative for the lower and upper bearing, wherein the upper bearing (60) having an inner surface engaging a head end portion (28) in direct metal-to metal sliding contact, and outer surface engaging a side wall of the housing (20). It would have also been obvious to one of ordinary skill in the art at the time of invention was made to provide the ball joint of

Graham et al., with an annular metal bearing as taught by Gaines et al. in order to provide a bearing for the retention of lubricant. Herbenar teaches a ball joint (Figs. 1-3, column 3, lines 54-60) having a lower bearing (42) and an annular upper bearing (40), the annular upper bearing (40) having a split segment (56) linking the inner surface (62) an outer surface (58), wherein the split segment (56) disrupting a full circular continuity of the annular upper bearing (40) and establishing a generally C-shaped body thereof and providing circumferential flexibility in the annular upper bearing (40); wherein the annular metal upper bearing (40) is configured to engage the side wall of the housing (12); and the lower bearing (42) retained with the central bore by an interference fit. It would have also been obvious to one of ordinary skill in the art at the time of invention was made to provide the upper bearing of Graham et al., with a C-shaped split segment, the upper bearing to engage the side wall of the housing as taught by Herbenar in order to provide a bearing with the expansible characteristic and creating an assembly which is operational with varying clearance or interference fits between the bearing and the bore of the housing due to tolerance stack ups.







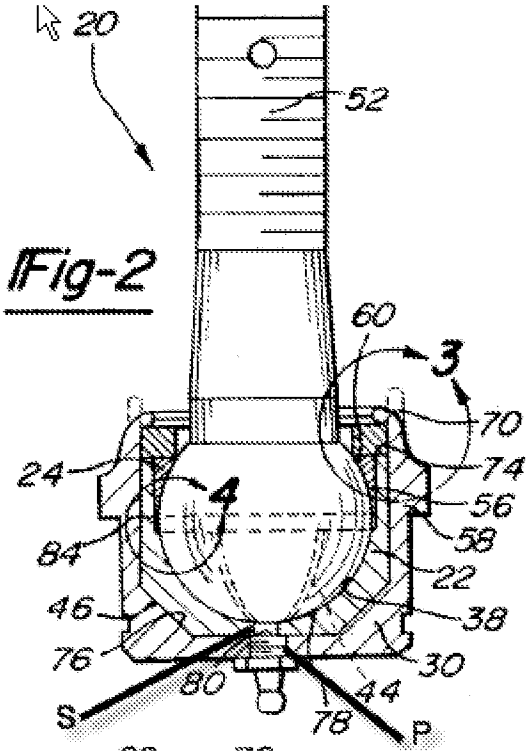


Fig-2

With respect to claims 3 and 5, Graham et al. disclose (Fig. 2) that the annular cover plate (15) and spring member (14) are composed of metal, and the annular metal upper bearing (13) is axially displaceable within the central bore.

With respect to claim 6, Graham et al. disclose the claimed invention except for the lower bearing is retained with the central bore by an interference fit. Herbenar teaches a joint (Fig. 1) having a lower bearing is retained with the central bore (18) by an interference fit. It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the joint of Graham et al. with a lower bearing as taught by Herbenar in order to urge the lower bearing into uniform bearing relationship with the movable member.

With respect to claim 7, Graham et al. discloses (Fig. 1) that the dust boot restrictor (17) disposed about the shank portion (12b-12d).

With respect to claim 8, Graham et al. disclose the claimed invention except for having a flexible dust cover coupled between the housing and the shank portion of the movable member. Herbenar teaches (Fig. 1) a flexible dust cover (74) coupled between the housing (12) and the shank portion (32) of the movable member (28). It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the joint of Graham et al., with a dust cover as taught by Herbenar in order to seal the open upper end of the housing.

With respect to claim 10, Graham et al. disclose (Fig. 1) the housing (11) includes a deformable annular region (11j) adjacent the open end of the central bore, the deformable annular region adapted for radially inward deformation to secure the annular cover plate (15) within the central bore.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Graham et al., Maughan, Gaines et al. and Herbenar as applied to claims 1, 3-8, and 10 above, and further in view of US Patent No. 5,116,159 Kern, Jr. et al.

With respect to claim 11, Graham et al. disclose the claimed invention except the annular cover plate including a chamfered inner surface to restrict articulation of the movable member. Kern Jr. et al. teach a (Fig, 4, column 3, lines 55-57) that the edge of the annular edge (50) of the bearing (14) has a chamfered edge (54) to facilitating extrusion of the plastic upon the forming of

the joint during preload. It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the inner surface of the annular cover plate of Graham et al. with a chamfered as taught by Kern, Jr. et al. in order facilitating extrusion of the plastic upon the forming of the joint during preload and offers a grater extrusion capacity for any given set of dimensional tolerances.

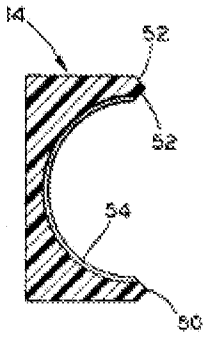


FIG. 4

Response to Arguments

Applicant's arguments with respect to claims 1, 3-8, 10 and 11 have been considered but are moot in view of the new ground(s) of rejection.

However, with respect to claim 1, Applicants argue that Graham does not teach the annular metal upper bearing engage the outer side wall of the housing nor is it formed with a split segment. This is not persuasive.

Examiner should point out that Graham clearly teaches that the annular metal upper bearing engages the outer side wall of the housing via the ball (12a). Further, it is apparent the claim does not require direct engagement between the upper bearing and housing. Meanwhile, Gaines et al. teach the outer surface of the annular metal upper bearing (60) in direct metal-to metal contact with the inner surface of the housing (20).

Applicants argue that the Maughan teaches an all-plastic socket joint. Further, the annular upper bearing of Maughan does not include split segment and the lubrication port of Maughan is not oriented in direct facing opposition to a flat spot on eh head end portion of moveable member. This is not persuasive.

Examiner was relying on Herbenar reference to teach the upper bearing with split segment not Maughan reference. Therefore, this argument is not commensurate with the scope of the rejection.

Applicants argue that the lubrication port of Maughan not being oriented in direct facing opposition to a flat spot on the head portion. This is not persuasive.

Graham already discloses the ball head with flat spot. Therefore, it is obvious to one ordinary skill in the art to position the lubrication port of Maughan on the flat spot of the Graham in order to lubricate the joint.

Applicant reminded that references cannot be attached individually when the rejection is based on a combination of references. Further, the rejection made base on 35 USC § 103 not USC §102. Therefore, each one of the references teach each element which lacking from the Graham, i.e., Maughan teaches a lubrication port and Herbenar teaches a bearing with split segment and Gains et al. teach a ball joint with a metal upper and lower bearings where the outer surface of the upper bearing is indirect metal-to metal contact with the inner surface of the housing.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action, e.g., claim 1, lines 16, the limitation of "**in direct metal-to metal sliding contact**", was not claimed in original claimed invention. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nahid Amiri whose telephone number is (571) 272-8113. The examiner can normally be reached on Monday through Thursday from 8:300-6:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nahid Amiri
Examiner
Art Unit 3679
March 24, 2008

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679